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Southern Nuclear Operating Company
Vogtle Electric Generating Plant Unit 3
ITAAC Closure Notification on Completion of ITAAC 2.3.07.05.i [Index Number 396]

Ladies and Gentlemen:

In accordance with 10 CFR 52.99(c)(1), the purpose of this letter is to notify the Nuclear Regulatory Commission (NRC) of the completion of Vogtle Electric Generating Plant (VEGP) Unit 3 Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Item 2.3.07.05.i [Index Number 396]. This ITAAC confirms that the seismic Category I Spent Fuel Pool Cooling System components identified in the VEGP Unit 3 Combined License (COL) Appendix C, Table 2.3.7-1 can withstand seismic design basis loads without loss of safety function. The closure process for this ITAAC is based on the guidance described in Nuclear Energy Institute (NEI) 08-01, "Industry Guideline for the ITAAC Closure Process Under 10 CFR Part 52," which was endorsed by the NRC in Regulatory Guide 1.215.

This letter contains no new NRC regulatory commitments. Southern Nuclear Operating Company (SNC) requests NRC staff confirmation of this determination and publication of the required notice in the Federal Register per 10 CFR 52.99.

If there are any questions, please contact Kelli Roberts at 706-848-6991.

Respectfully submitted,

Michael J. Yox
Regulatory Affairs Director Vogtle 3 & 4

Enclosure: Vogtle Electric Generating Plant (VEGP) Unit 3
Completion of ITAAC 2.3.07.05.i [Index Number 396]

MJY/RLB/sfr

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Southern Nuclear Operating Company
ND-21-0093
Enclosure

Vogtle Electric Generating Plant (VEGP) Unit 3
Completion of ITAAC 2.3.07.05.i [Index Number 396]

ITAAC Statement

Design Commitment

5. The seismic Category I components identified in Table 2.3.7-1 can withstand seismic design basis loads without loss of safety functions.

Inspections/Tests/Analyses

i) Inspection will be performed to verify that the seismic Category I components identified in Table 2.3.7-1 are located on the Nuclear Island.

ii) Type tests, analyses, or a combination of type tests and analyses of seismic Category I equipment will be performed.

iii) Inspection will be performed for the existence of a report verifying that the as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions.

Acceptance Criteria

i) The seismic Category I components identified in Table 2.3.7-1 are located on the Nuclear Island.

ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis loads without loss of safety function.

iii) A report exists and concludes that the as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions.

ITAAC Determination Basis

This ITAAC requires that inspections, tests, and analyses be performed and documented to ensure the Spent Fuel Pool Cooling System (SFS) components (equipment) identified as seismic Category I in the Combined License (COL) Appendix C, Table 2.3.7-1 are designed and constructed in accordance with applicable requirements.

i) The seismic Category I components identified in Table 2.3.7-1 are located on the Nuclear Island.

To assure that seismic Category I components can withstand seismic design basis loads without loss of safety function, all the components in the Table 2.3.7-1 were designed to be located on the seismic Category I Nuclear Island. In accordance with the Equipment Qualification (EQ) ITAAC As-built Walkdown Guideline (Reference 1) and the EQ ITAAC As-built Installation Documentation Guideline (Reference 2), inspections were conducted of the SFS to confirm the satisfactory installation of the seismically qualified components. The inspection included verification of component make/model/serial number and verification of component location (Building, Elevation, Room). The As-Built EQ Reconciliation Reports (EQRRs) (Reference 3) identified in Attachment A document the results of the inspections and conclude that the seismic Category I components are located on the Nuclear Island.

ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis loads without loss of safety function.

Seismic Category I equipment identified in Table 2.3.7-1 required type tests and/or analyses to demonstrate structural integrity and operability. Structural integrity of the seismic Category I valves

was demonstrated by analysis in accordance with American Society of Mechanical Engineers (ASME) Code Section III (Reference 4). Functionality of the active safety-related valves under seismic loads was determined using the guidance of ASME QME-1-2007 (Reference 5).

The safety-related (Class 1E) electrical equipment identified in Table 2.3.7-1 was seismically qualified by type testing combined with analysis in accordance with Institute of Electrical and Electronics Engineers (IEEE) Standard 344-1987 (Reference 6).

The specific qualification method (i.e., type testing, analysis, or combination) used for each piece of equipment listed in Table 2.3.7-1 is identified in Attachment A. Additional information about the methods used to qualify AP1000 safety-related equipment is provided in the Updated Final Safety Analysis Report (UFSAR) Appendix 3D (Reference 7). The EQ Reports (Reference 8) identified in Attachment A contain applicable test reports and associated documentation and conclude that the seismic Category I equipment can withstand seismic design basis loads without loss of safety function.

iii) A report exists and concludes that the as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions.

Inspections (Reference 1 and Reference 2) were conducted to confirm the satisfactory installation of the seismically qualified equipment identified in Table 2.3.7-1. The inspections verified the equipment make/model/serial number, as-designed equipment mounting orientation, anchorage and clearances, and electrical and other interfaces. The documentation of installed configuration of seismically qualified components includes photographs and/or sketches/drawings of equipment/mounting/interfaces.

As part of the seismic qualification program, consideration was given to the definition of the clearances needed around the equipment mounted in the plant to permit the equipment to move during a postulated seismic event without causing impact between adjacent pieces of safety-related equipment. When required, seismic testing measuring the maximum dynamic relative displacement of the top and bottom of the equipment was performed. EQ Reports (Reference 8) identify the equipment mounting employed for qualification and establish interface requirements for assuring that subsequent in-plant installation does not degrade the established qualification. Interface requirements are defined based on the test configuration and/or other design requirements.

Attachment A identifies the EQRR (Reference 3) completed to verify that the as-built seismic Category I equipment listed in Table 2.3.7-1, including anchorage, is seismically bounded by the tested or analyzed conditions, IEEE Standard 344-1987 (Reference 6), and NRC Regulatory Guide 1.100 (Reference 9).

Together, these reports (References 3 and 8) provide evidence that the ITAAC Acceptance Criteria requirements are met:

- The seismic Category I equipment identified in Table 2.3.7-1 is located on the Nuclear Island;
- A report exists and concludes that the seismic Category I equipment can withstand seismic design basis loads without loss of safety function; and
- A report exists and concludes that the as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions.

References 3 and 8 are available for NRC inspection as part of the Unit 3 ITAAC 2.3.07.05.i Completion Package (Reference 10).

ITAAC Finding Review

In accordance with plant procedures for ITAAC completion, Southern Nuclear Operating Company (SNC) performed a review of all findings pertaining to the subject ITAAC and associated corrective actions. This finding review, which included now-consolidated ITAAC Index Numbers 397 and 398, found one relevant ITAAC finding associated with this ITAAC.

- Notice of Nonconformance 99901412/2012-201-02 (Closed)

The corrective actions for this finding have been completed and the finding closed. The ITAAC completion review is documented in the ITAAC Completion Package for ITAAC 2.3.07.05.i (Reference 10) and is available for NRC review.

ITAAC Completion Statement

Based on the above information, SNC hereby notifies the NRC that ITAAC 2.3.07.05.i was performed for VEGP Unit 3 and that the prescribed acceptance criteria were met.

Systems, structures, and components verified as part of this ITAAC are being maintained in their as-designed, ITAAC compliant condition in accordance with approved plant programs and procedures.

References (available for NRC inspection)

1. ND-RA-001-014, EQ ITAAC As-built Walkdown Guideline, Version 3.1
2. ND-RA-001-016, EQ ITAAC As-built Installation Documentation Guideline, Version 1.0
3. As-Built Equipment Qualification Reconciliation Reports (EQRRs) as identified in Attachment A
4. American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code, Section III, Rules for Construction of Nuclear Power Plant Components, 1998 Edition with 2000 Addenda
5. ASME QME-1-2007, Qualification of Active Mechanical Equipment Used in Nuclear Power Plants, June 2007
6. IEEE Standard 344-1987, IEEE Recommended Practices for Seismic Qualification of Class 1E Equipment for Nuclear Power Generating Stations
7. Vogtle 3&4 Updated Final Safety Analysis Report Appendix 3D, Methodology for Qualifying API000 Safety-Related Electrical and Mechanical Equipment, Revision 9.1
8. Equipment Qualification (EQ) Reports as Identified in Attachment A
9. Regulatory Guide 1.100, Seismic Qualification of Electric and Mechanical Equipment for Nuclear Power Plants, Revision 2
10. 2.3.07.05.i -U3-CP-Rev0, ITAAC Completion Package

Attachment A

System: Spent Fuel Pool Cooling System (SFS)

Component Name [+]	Tag No. [+]	Seismic Cat. 1 [+]	Type of Qual.	EQ Reports (Reference 8)	As-Built EQRR (Reference 3)
Spent Fuel Pool Level Sensor[+++++]	SFS-019A	Yes	Type Testing & Analysis	SV3-JE52-VBR-002 / SV3-JE52-VBR-001	2.3.07.05.i-U3-EQRR-PCD005
Spent Fuel Pool Level Sensor[+++++]	SFS-019B	Yes	Type Testing & Analysis	SV3-JE52-VBR-002 / SV3-JE52-VBR-001	2.3.07.05.i-U3-EQRR-PCD005
Spent Fuel Pool Level Sensor[+++++]	SFS-019C	Yes	Type Testing & Analysis	SV3-JE52-VBR-002 / SV3-JE52-VBR-001	2.3.07.05.i-U3-EQRR-PCD005
Refueling Cavity Drain to SGS Compartment Isolation Valve	SFS-PL-V031	Yes	Type Testing & Analysis	SV3-PV11-VBR-002 / SV3-PV11-VBR-001	2.3.07.05.i-U3-EQRR-PCD001
Refueling Cavity to SFS Pump Suction Isolation Valve	SFS-PL-V032	Yes	Type Testing & Analysis	SV3-PV11-VBR-002 / SV3-PV11-VBR-001	2.3.07.05.i-U3-EQRR-PCD001
Refueling Cavity Drain to Containment Sump Isolation Valve	SFS-PL-V033	Yes	Type Testing & Analysis	SV3-PV10-VBR-002 / SV3-PV10-VBR-001	2.3.07.05.i-U3-EQRR-PCD004
IRWST to SFS Pump Suction Line Isolation Valve	SFS-PL-V039	Yes	Type Testing & Analysis	SV3-PV11-VBR-002 / SV3-PV11-VBR-001	2.3.07.05.i-U3-EQRR-PCD001
Fuel Transfer Canal to SFS Pump Suction Iso. Valve	SFS-PL-V040	Yes	Type Testing & Analysis	SV3-PV11-VBR-002 / SV3-PV11-VBR-001	2.3.07.05.i-U3-EQRR-PCD001
Cask Loading Pit to SFS Pump Suction Isolation Valve	SFS-PL-V041	Yes	Type Testing & Analysis	SV3-PV11-VBR-002 / SV3-PV11-VBR-001	2.3.07.05.i-U3-EQRR-PCD001
Cask Loading Pit to SFS Pump Suction Isolation Valve[++]	SFS-PL-V042	Yes	Type Testing & Analysis	SV3-PV11-VBR-002 / SV3-PV11-VBR-001	2.3.07.05.i-U3-EQRR-PCD001
SFS Pump Discharge Line to Cask Loading Pit Isolation Valve[++]	SFS-PL-V045	Yes	Type Testing & Analysis	SV3-PV11-VBR-002 / SV3-PV11-VBR-001	2.3.07.05.i-U3-EQRR-PCD001
Cask Loading Pit to WLS Isolation Valve[++]	SFS-PL-V049	Yes	Type Testing & Analysis	SV3-PV10-VBR-002 / SV3-PV10-VBR-001	2.3.07.05.i-U3-EQRR-PCD004
Spent Fuel Pool to Cask Washdown Pit Isolation Valve[+++]	SFS-PL-V066	Yes	Type Testing & Analysis	SV3-PV10-VBR-008 / SV3-PV10-VBR-007	2.3.07.05.i-U3-EQRR-PCD003
Cask Washdown Pit Drain Isolation Valve[+++]	SFS-PL-V068	Yes	Type Testing & Analysis	SV3-PV11-VBR-002 / SV3-PV11-VBR-001	2.3.07.05.i-U3-EQRR-PCD001
Refueling Cavity Drain Line Check Valve[++++]	SFS-PL-V071	Yes	Analysis	SV3-PV03-VBR-014 / SV3-PV03-VBR-013	2.3.07.05.i-U3-EQRR-PCD002

Component Name [+]	Tag No. [+]	Seismic Cat. 1 [+]	Type of Qual.	EQ Reports (Reference 8)	As-Built EQRR (Reference 3)
Refueling Cavity Drain Line Check Valve[++++]	SFS-PL-V072	Yes	Analysis	SV3-PV03-VBR-014 / SV3-PV03-VBR-013	2.3.07.05.i-U3-EQRR-PCD002
SFS Containment Floodup Isolation Valve	SFS-PL-V075	Yes	Type Testing & Analysis	SV3-PV11-VBR-002 / SV3-PV11-VBR-001	2.3.07.05.i-U3-EQRR-PCD001

Notes:

[+] Excerpt from COL Appendix C Table 2.3.7-1
[++] Active Function to Transfer Closed per COL Appendix C Table 2.3.7-1
[+++] Active Function to Transfer Open per COL Appendix C Table 2.3.7-1
[++++] Active Function to Transfer Open – Transfer Closed per COL Appendix C Table 2.3.7-1
[+++++] Class 1E per COL Appendix C Table 2.3.7-1